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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,347	07/10/2003	Tetsujiro Kondo	450100-04657	2741
7590 07/19/2007 William S. Frommer, Esq. FROMMER LAWRENCE & HAUG LLP 745 Fifth Avenue New York, NY 10151			EXAMINER WOZNIAK, JAMES S	
			ART UNIT 2626	PAPER NUMBER
			MAIL DATE 07/19/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/617,347

Applicant(s)

KONDO ET AL.

Examiner

James S. Wozniak

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/3/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 and 6-8 is/are allowed.
- 6) ☒ Claim(s) 4,5,9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the office action from 2/13/2007, the applicant has submitted an amendment, filed 5/3/2007, amending claims 1, 3-6, and 8-10, while arguing that the amended claims overcome the previous objections/rejections (*Amendment, Page 11*). Applicant's arguments have been fully considered, however, with respect to claims 4-5 and 9-10 the previous rejection is maintained, altered only with respect to the amended claims and due to the reasons listed below in the response to arguments. In response to the amendment of claims 1, 3, 6, and 8, claims 1-3 and 6-8 are now allowable over the prior art of record.
2. In response to the amendment of the specification and title, the examiner has withdrawn the previous specification objections.
3. With respect to amended claims 6 and 8-10, the examiner has withdrawn the previous 35 U.S.C. 112, first and second paragraph rejections.
4. In response to amended claims 1, 3, 6, and 8, the examiner has withdrawn the previous corresponding 35 U.S.C. 101 rejections.

Response to Arguments

5. Applicant's arguments have been fully considered but they are not persuasive for the following reasons:

With respect to **Claims 4-5 and 9-10**, the applicant argues that the amended claims overcome the 35 U.S.C. 101 rejections stated in the Office Action (*Amendment, Page 11*). In response, the examiner notes that although the claims have been amended to include a computer-readable medium, the body of the claims is still described in terms of the program rather than a method performed by a computer when the program is executed (*i.e., "the program comprising" or "A computer readable program... for controlling an information encoding apparatus, comprising" rather than --the program, which when executed by a computer performs a method comprising-- or --A computer-readable medium storing a program that when executed by an information encoding apparatus performs a method comprising--*). As such, claims 4-5 and 9-10 are still directed to non-statutory subject matter.

Also, it should be further pointed out that the computer-readable mediums recited in the specification are not limited to tangible computer-readable mediums (*communication mediums described on Page 27 of the specification*), and for this reason also these claims are directed to non-statutory subject matter. The tangible computer-readable mediums in the specification are, however, defined as computer-readable recording mediums, and the claims should be accordingly amended in order to overcome this aspect of the 35 U.S.C. 101 rejection.

Double Patenting

6. **Claim 5** is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 4.

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

7. **Claim 10** is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 9.

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. **Claims 4-5 and 9-10** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 4 and 9 are drawn to a “program” data structure *per se* as recited in the preamble (*i.e., the body of the claims is still described in terms of the program rather than a method*

performed by a computer when the program is executed) and as such are directed to non-statutory subject matter. See MPEP § 2106.IV.B.1.a.

Data structures not claimed as embodied in computer readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Similarly, computer programs claimed as computer listings *per se*, i.e., the descriptions or expressions of the programs are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized to produce a tangible, concrete, and useful result.

Also, the computer-readable mediums recited in the specification are not limited to tangible computer-readable mediums (*communication mediums described on Page 27 of the specification*), and for this reason also the aforementioned claims are directed to non-statutory subject matter. The tangible computer-readable mediums in the specification are, however,

defined as computer-readable recording mediums (*Pages 26-27*), and the claims should be accordingly amended in order to overcome this aspect of the 35 U.S.C. 101 rejection.

Claims 5 and 10 are drawn to a “program” *per se* as recited in the preamble (*i.e., the body of the claims is still described in terms of the program rather than a method performed by a computer when the program is executed*) and as such are directed to non-statutory subject matter. See MPEP § 2106.IV.B.1.a. Data structures not claimed as embodied in computer readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. Similarly, computer programs claimed as computer listings *per se*, i.e., the descriptions or expressions of the programs are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized.

Also, the computer-readable mediums recited in the specification are not limited to tangible computer-readable mediums (*communication mediums described on Page 27 of the*

specification), and for this reason also the aforementioned claims are directed to non-statutory subject matter. The tangible computer-readable mediums in the specification are, however, defined as computer-readable recording mediums (*Pages 26-27*), and the claims should be accordingly amended in order to overcome this aspect of the 35 U.S.C. 101 rejection.

Allowable Subject Matter

10. **Claims 1-3 and 6-8** are allowable over the prior art of record.

11. The following is an examiner's statement of reasons for allowance:

With respect to **Claims 1 and 3**, the prior art fails to explicitly teach or fairly suggest, either individually or in combination, an audio encoding method and system that adds and indicates the presence of additional encoded information in an audio signal (*i.e., copyright information, lyrics, artists' names, and music categories, see specification, Page 19*) by converting an input audio signal into a spectrum, removing the spectra of frequencies having levels below a minimum audible level curve, and adding and indicating the presence of extra information by: determining whether first and second frequency spectrum levels are above the audible level curve (*See Fig. 5 and specification, page 15*), switching frequency levels of the first and second frequencies if the first determination proves valid, and comparing the switched frequencies to an audible level curve to determine if one out of the two frequency spectra is above the curve (*See Fig. 6 and specification, pages 15-16*). If the second condition holds valid

then the audio signals are switched, the additional information is added, and the audio signal is encoded along with the additional information.

With respect to **Claims 6 and 8**, the prior art fails to explicitly teach or fairly suggest, either individually or in combination, an audio decoding method and system that determines the presence of and extracts additional encoded information in an audio signal (*i.e., copyright information, lyrics, artists' names, and music categories, see specification, Page 19*) through decoding an input encoded audio signal and determining the presence of extra information by: comparing two frequencies to an audible level curve to determine if one out of the two frequency spectra is above the curve (*See Fig. 6*) and determining whether first and second switched frequency spectrum levels are above the audible level curve (*See Fig. 5*). If the both conditions hold then the additional information is extracted from the audio signal.

The closest prior art is Srinivasan (*U.S. Patent: 6,272,176*). Srinivasan discloses a system and method for adding ancillary, non-audio information to an audio system (*Col. 7, Lines 10-26*). Srinivasan teaches that this information is indicated and encoded by swapping a spectral amplitude at a particular index with a maximum spectral amplitude in close proximity (*Col. 11, Lines 1-15*). Srinivasan also notes the well-known concept of audio compression based on audibility levels (*masking higher, non-audible frequencies, Col. 10, Lines 5-19 and Lines 48-59*). Although Srinivasan discloses swapping frequencies to indicate non-audio ancillary information, Srinivasan does not explicitly teach or even suggest the test conditions recited in the claimed invention, wherein two frequency spectra both have to be above an audibility curve initially and one of the two frequency spectra has to be above and the other below an audibility curve when

switched to encode additional information in an audio signal and both conditions must hold in order to extract the additional information in an audio decoding process.

Claim 2 further limits Claim 1, and thus, also contains allowable subject matter.

Claim 7 further limits Claim 6, and thus, also contains allowable subject matter.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632.

The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached at (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
7/3/2007


PATRICK N. EDOUARD
SUPERVISORY PATENT EXAMINER